

**2000 ANNUAL REPORT OF
ELECTRIC SERVICE RELIABILITY
FOR THE ILLINOIS DISTRICT OF
MIDAMERICAN ENERGY COMPANY**

May 31, 2001

A. Plan for Future Investment and Reliability Improvements

[411.120 b)3) A)]:

A plan for future investment and, where necessary, reliability improvements for the jurisdictional entity's transmission and distribution facilities that will ensure continued reliable delivery of energy to customers and provide the delivery reliability needed for fair and open competition, along with the estimated cost of implementing the plan and any changes to the plan from the previous annual report.

i. Description of MidAmerican Energy Company's (MidAmerican) Illinois District

[411.120 b) 3) A) i)]:

The plan must cover all operating areas, including a description of the relevant characteristics of each operating area and the age and condition of the jurisdictional entity's equipment and facilities in each operating area.

The Illinois District service territory includes the greater Illinois Quad Cities area, which is predominately urban, and outlying areas in and around the cities of Sherrard, Orion and Reynolds, which are mostly rural. A 345 kV, 161 kV and 69 kV networked transmission system, supplies the Illinois District. There are three 345/161 kV and five 161/69 kV substations served off this network in the Quad Cities (Iowa and Illinois) area. The 161 kV and 69 kV supply from these substations loops throughout the Quad Cities area to serve several 161/13 kV and 69/13 kV substations. These substations supply a radial 13.2 and 4 kV distribution system. The distribution system utilizes 8,058 overhead conductor-miles and 580 underground conductor-miles to serve 81,447 customers in the Illinois District.

The Illinois District transmission system is composed of 3,825 poles and supporting structures with an average age of approximately 33 years. The Illinois District distribution system is composed of 86,558 poles and supporting structures with an average age of approximately 29 years.

All Illinois District 345 kV and 161 kV lines are aerially inspected twice per year and 69 kV lines are aerially inspected every year for general condition, tree clearances, damage and right-of-way encroachments. Every three years, problems uncovered during scheduled tree trimming on all Illinois District 345 kV, 161 kV, 69 kV, 13 kV and 4 kV circuits, are noted, reported, and, followed-up on. In addition, anywhere from monthly to every three years, distribution circuit problems observed during scheduled inspections of distribution capacitors, line reclosers and voltage regulators, are noted, reported and followed-up on. Finally, a thorough ground patrol and inspection of all Illinois transmission and distribution circuits is performed on a 10-year cycle. Follow-up maintenance and construction is performed as required. As a result of these periodic inspections and follow-up maintenance and construction, the transmission and distribution facilities maintain adequate mechanical and electrical properties to provide continued safe and reliable service to MidAmerican's Illinois customers.

ii. **Projects to Address Reliability Challenges and Associated Time Table**

[411.120 b) 3) A) ii):

The plan shall cover a period of no less than three years following the year in which the report was filed.

[411.120 b) 3) A) iii):

The plan shall identify all foreseeable reliability challenges and describe specific projects for addressing each.

[411.120 b) 3) A) iv):

The plan shall provide a timetable for achievement of the plan's goals.

[411.120 b) 3) A) vi):

The plan must consider all interruption causes listed in Section 411.120(b)(3)(D).

[411.120 b) 3) A) vii):

The plan must consider the effects on customers and the cost of reducing the number of interruptions reported as required by Section 411.120(b)(3)(C).

Each year as part of MidAmerican's Transmission and Distribution (T&D) Capital Budgeting process, the Transmission and Distribution Planning Department reviews the Illinois District electric system for the next 10 years to determine what capital improvements are required to maintain a safe and reliable system. This review includes all transmission projects, and those distribution projects with an estimated cost greater than or equal to \$100,000. For each project reviewed, the customer value of expected unserved energy is calculated to determine the impact on the customer. Unserved energy is calculated using expected frequency of outage, expected duration of outage and load impacted. Major capital projects to improve reliability budgeted in the Illinois District through 2004 resulting from the 2000 T&D Capital Budgeting process are shown in Attachment A.

Capital projects for the Illinois District distribution system less than \$100,000 are originated in the Illinois District Engineering group. Major capital projects budgeted through 2004 are shown in Attachment A.

In addition to the above capital projects, MidAmerican also has ongoing inspection and maintenance programs for its transmission and distribution systems in the Illinois District. Each program with a short description is listed in Attachment B. The effectiveness of these various programs can be evaluated by reviewing annual interruption data statistics associated with the interruptions causes addressed by these programs. The table below provides a summary of interruption data associated with the general interruption cause categories of 'Animal', 'Tree', 'Weather' and 'Equipment OH'.

**Interruption Statistics by Cause
Illinois District
2000**

<u>Cause</u>	<u>Number of Interruptions</u>	<u>Average Duration (per Interruption)</u>
Animal	586	91 minutes
Equipment OH	342	163 minutes
Tree Related	283	222 minutes
Weather	736	226 minutes

The number of customers experiencing interruptions and the average duration per customer interruption demonstrates the impact on Illinois District customers.

**Interruption Statistics by Cause
Number and Duration by Customer
Illinois District
2000**

<u>Cause</u>	<u>Customer Interruptions</u>	<u>Average Duration (per customer Interruption)</u>
Animal	13,517	82 minutes
Equipment OH	28,674	95 minutes
Tree Related	22,748	154 minutes
Weather	40,237	143 minutes

The above interruption cause statistics can be used to compare against future year interruption cause statistics to evaluate the effectiveness of the various inspection programs listed in Attachment B.

The above projects and on-going inspection programs are in place to address all outage causes. Both Capital and O&M expenditures are allocated based on the most critical need and where the best benefit for the expenditure can be obtained. The costs for these capital and operations and maintenance (O&M) reliability projects are included in MidAmerican's Electric Capital and O&M budgets. Projected Electric Capital and O&M budget expenditures by MidAmerican in the Illinois District for 2001-2004 are:

**Budgeted Transmission Capital¹ and O&M² Expenditures
Illinois District
2001 – 2004
(\$1,000'S)**

Category	2001	2002	2003	2004
Capital³	\$ 51	\$ 52	\$ 53	\$ 229
O&M³	\$1,602	\$1,639	\$1,676	\$1,714

- 1- This represents budgeted capital dollars for transmission projects directly attributable to the Illinois District.
- 2- This represents Illinois District 2001 budgeted O&M expenses allocated to transmission based on the 2000 percentage split for transmission. O&M expenditures are only projected out for one year. 2002 – 2004 O&M expenditures were derived by escalating 2001 projected O&M dollars by 3% for labor and 2% for non-labor. Since O&M expenditures are only projected out for one year, future years O&M expenditures may change from year to year depending upon specific O&M initiatives planned for the first year.
- 3- A redefinition of transmission and distribution assets was performed pursuant to FERC Order 888 using the FERC seven factor test guidelines in 2000. Therefore, capital and O&M expenditures for 2001 forward will reflect this redefinition and will not be directly comparable with previous years' projections.

Budgeted transmission capital dollars are higher in the last year due to projected replacement of 345 kV relaying on circuit 345-39-93-1.

**Budgeted Distribution Capital⁴ and O&M⁵ Expenditures
Illinois District
2001 – 2004
(\$1,000'S)**

Category	2001	2002	2003	2004
Capital⁶	\$4,456	\$3,584	\$3,912	\$4,717
O&M⁶	\$8,361	\$8,568	\$8,780	\$8,997

- 4- This represents budgeted capital dollars for projects directly attributable to the Illinois District.
- 5- This represents Illinois District 2001 budgeted O&M expenses allocated to distribution based on the 2000 percentage split for distribution. O&M expenditures are only projected out for one year. 2002 – 2004 O&M expenditures were derived by escalating 2001 projected O&M dollars by 3% for labor and 2% for non-labor. Since O&M expenditures are only projected out for one year, future years' O&M expenditures may change from year to year depending upon specific O&M initiatives planned for the first year.
- 6- A redefinition of transmission and distribution assets was performed pursuant to FERC Order 888 using the FERC seven factor test guidelines in 2000. Therefore, capital and O&M expenditures for 2001 forward will reflect this redefinition and will not be directly comparable with previous years' projections.

Budgeted distribution capital dollars are higher in 2001 due to initiation of a distribution automation pilot project and are higher in 2004 due to installation of a third 161-13 kV transformer at Substation 49.

iii. **Unresolved Reliability Complaints – Other Utilities, ISOs, ARESs**

[411.120 b) 3) A) v)]:

The plan shall report and address all unresolved reliability complaints about the jurisdictional entity's system received from other utilities, independent system operators, and alternative retail electric suppliers.

MidAmerican has no unresolved reliability complaints for the Illinois District to report under this section.

iv. **Actions Taken on Unresolved Reliability Complaints – Other Utilities, ISOs, ARESs**

[411.120 b) 3) A) vi)]:

The plan shall report the specific actions, if any, the jurisdictional entity is taking to address the concerns raised in such complaints received from other utilities, independent system operators, and alternative retail electric suppliers.

MidAmerican has no unresolved reliability complaints for the Illinois District to report under this section.

B. **Implementation of 1999 Plan for Future Investment**

[411.120 b) 3) B)]:

A report of the jurisdictional entity's implementation of its plan filed pursuant to subsection (b)(3)(A) for the previous annual reporting period, including an identification of significant deviations from the first year of the previous plan and the reasons for the deviations.

Transmission Capital Projects

An update on transmission capital reliability projects for the Illinois District that were identified in the 1999 Annual Report is shown in Attachment C.

Projected 2000 transmission capital dollars for projects directly related to the Illinois District in the 1999 Annual Report was \$537,000. Actual dollars spent was \$176,000. The difference is primarily due to the redefinition of transmission and distribution assets pursuant to FERC Order 888 using the FERC seven factor test guidelines which shifted dollars from transmission to distribution in 2000.

Projected 2001-2003 transmission capital dollars for projects directly related to the Illinois District in the 1999 Annual Report was \$1,480,000. Projected dollars for the same period in the 2000 Annual Report is \$156,000. The difference primarily results from the redefinition of transmission and distribution assets pursuant to FERC Order 888 using the FERC seven factor test guidelines which shifted dollars from transmission to distribution in 2000.

Transmission O&M Projects

Transmission O&M includes a general array of periodic inspections and maintenance performed to maintain adequate mechanical and electrical properties for the safe and reliable operation of MidAmerican's transmission system. Included are the on-going tree trimming, transmission circuit inspection, and transmission wood pole plant inspection programs listed in Attachment B.

Projected transmission O&M dollars for the Illinois District in 2000 from the 1999 Annual report was \$1,379,000. Actual dollars spent was \$1,443,000.

Projected 2001-2003 transmission O&M dollars for the Illinois District from the 1999 Annual Report was \$4,345,000. Projected dollars for the same period in the 2000 Annual Report is \$4,917,000.

Distribution Capital Projects

An update on distribution capital reliability projects for the Illinois District that were identified in the 1999 Annual Report is shown in Attachment C.

Projected 2000 distribution capital dollars for projects directly related to the Illinois District in the 1999 Annual Report was \$4,007,000. Actual dollars spent was \$3,857,000. The redefinition of transmission and distribution assets pursuant to FERC Order 888 using the FERC seven factor test guidelines shifted dollars from transmission to distribution. The difference between projected 2000 distribution capital dollars in the 1999 Annual Report and actual dollars spent in 2000 is due to \$330,000 less spent on metering than projected and elimination of a projected \$300,000 expenditure in 2000 for undergrounding a 69 kV line which will now be completely customer reimbursed.

Projected 2001-2003 distribution capital dollars for projects directly related to the Illinois District in the 1999 Annual Report was \$11,008,000. Projected dollars for the same period in the 2000 Annual Report is \$11,952,000. The redefinition of transmission and distribution assets pursuant to FERC Order 888 using the FERC seven factor test guidelines shifted dollars from transmission to distribution. The reason there is not more of increase in the 2000 Report is because of the elimination of a projected \$460,000 expenditure in 2001 for undergrounding a 69 kV line which will now be completely customer reimbursed.

Distribution O&M Projects

Distribution O&M includes a general array of periodic inspections and maintenance performed to maintain adequate mechanical and electrical properties for the safe and reliable operation of MidAmerican's distribution system. Included are the on-going tree trimming, distribution circuit and distribution equipment inspections listed in Attachment B.

Projected distribution O&M dollars for the Illinois District in 2000 from the 1999 Annual report was \$7,042,000. Actual dollars spent was \$7,553,000. The increase is due primarily to increased emphasis on reliability enhancements that consists largely of the installation of animal protection on circuits.

Projected 2001-2003 distribution O&M dollars for the Illinois District from the 1999 Annual Report was \$22,210,000. Projected dollars for the same period in the 2000 Annual Report is \$25,709,000. The increase is due to increased emphasis on reliability enhancements which include replacement of transmission and sub-transmission structures, capacitor bank and controller

replacement, installation of automated switching devices and the proposed addition of two distribution circuits.

C. Number and Duration of Planned and Unplanned Interruptions and Impact on Customers

[411.120 b) 3) C):

The number and duration of planned and unplanned interruptions for the annual reporting period and their impacts on customers.

**Planned and Unplanned Interruption Number and Duration
Illinois District
(January 1, 2000 – December 31, 2000)**

Interruption Type	Number of Interruptions	Average Duration (per interruption)
Planned	21	34 minutes
Unplanned	2,179	171 minutes

The impact of both planned and unplanned interruptions on Illinois District customers can be demonstrated by the number of customers experiencing interruptions and the average duration per customer interruption.

**Planned and Unplanned Interruption
Number and Duration by Customer
Illinois District
(January 1, 2000 – December 31, 2000)**

Interruption Type	Customers Interrupted	Average Duration (per customer interruption)
Planned	1,472	15 minutes
Unplanned	57,344	121 minutes

D. Number and Causes of Controllable Interruptions

[411.120 b) 3) D):

The number and causes of controllable interruptions for the annual reporting period.

MidAmerican has identified the majority of interruption causes as uncontrollable. A listing of controllable interruption causes is provided in Attachment D. MidAmerican is working on the development of a procedure to provide, on an interruption-by-interruption basis, the classification of an interruption as controllable or uncontrollable. The new procedure for classifying interruptions will be completed in the summer of 2001 and will be used for reporting interruptions in MidAmerican's 2001 Electric Reliability Report.

Below is a summary of the number of controllable interruptions in the Illinois District during 2000.

Illinois District Controllable Interruptions 2000	
Cause	Number
MEC ERROR\ACCIDENT BY OUR CONTRACTOR	1
MEC Error\Accident by MEC	1

E. Customer Interruptions due to another Utility, Independent System Operator, Alternative Retail Electric Supplier

[411.120 b) 3) E]:

Customer service interruptions that were due solely to the actions or inactions of another utility, another jurisdictional entity, independent system operator, or alternative retail electric supplier for the annual reporting period.

There were zero outages in the Illinois District during 2000 due to another utility, independent system operator or alternative retail electric supplier.

F. Reliability Comparison of Customers buying Electric Energy from MidAmerican Energy Company versus from Another Utility or ARES.

[411.120 b) 3) F]:

A comparison of interruption frequency and duration for customers buying electric energy from the jurisdictional entity versus customers buying electric energy from another utility or alternative retail electric supplier for the annual reporting period. A jurisdictional entity may base this comparison on each customer's supplier as of December 31. A jurisdictional entity need not include this information for customers whose electric energy supplier is not known to the jurisdictional entity.

The table below show a comparison of the interruption frequency and duration of customers buying electric energy from MidAmerican versus customers buying electric energy from another utility or alternative retail electric supplier (ARES).

**ILLINOIS DISTRICT
2000
Comparison of Customer Interruption Frequency and Duration
Of Customers buying Energy from MidAmerican versus
Customers buying Energy from another Utility or ARES**

<u>Customer Energy Supplier</u>	<u>Interruption Frequency (int.s/cust.)</u>	<u>Interruption Duration (min.s/cust.)</u>
MidAmerican	1.521	184
Another Utility Or ARES	1.337	154

G. Report on Reliability of Existing Transmission and Distribution Systems

[411.120 b) 3) G)]:

A report of the age, current condition, reliability and performance of the jurisdictional entity's existing transmission and distribution facilities, which shall include, without limitation, the data listed below. In analyzing and reporting the age of the jurisdictional entity's plant and equipment, the jurisdictional entity may utilize book depreciation. Statistical estimation and analysis may be used where actual ages and conditions of facilities are not readily available. The use of such techniques shall be disclosed in the report.

i. Qualitative Characterization of MidAmerican Transmission and Distribution System

[411.120 b) 3) G) i)]:

A qualitative characterization of the condition of the jurisdictional entity's system defining the criteria used in making the qualitative assessment, and explaining why they are appropriate.

[411.120 b) 3) G) vii)]:

The corresponding information, in the same format, for the previous 3 annual reporting periods, if available.

MidAmerican's Illinois District transmission system is composed of 3,825 poles and supporting structures with an average age of approximately 33 years. The Illinois District distribution system is composed of 86,558 poles and supporting structures with an average age of approximately 29 years. These ages are based on a weighted average of the age of the poles, towers, and supporting structures. MidAmerican views the current

condition of both the transmission and distribution system as safe, in good repair, and in compliance with the applicable laws and code(s).

The criteria used to assess the current condition of MidAmerican's Illinois District system are the results of recent inspections completed in compliance with the transmission and distribution inspection program described in Section A) ii) of this Report and repeated here. All Illinois District 345 kV and 161 kV lines are aerially inspected twice per year and 69 kV lines are aerially inspected every year for general condition, tree clearances, damage and right-of-way encroachments. Every three years, problems uncovered during scheduled tree trimming on all Illinois District 345 kV, 161 kV, 69 kV, 13 kV and 4 kV distribution circuits are noted, reported, and followed-up on. In addition, anywhere from monthly to every three years, distribution circuit problems observed during scheduled inspections of distribution capacitors, line reclosers and voltage regulators, are noted, reported and followed-up on. Finally, a thorough ground patrol and inspection of all Illinois transmission and distribution circuits is performed on a 10-year cycle. Follow-up maintenance and construction is performed as required. These inspections provide first-hand, direct information that is the best source of information to use in making a qualitative assessment of the condition of MidAmerican's Illinois District transmission and distribution systems. Information gained from these inspections show that the transmission and distribution systems are adequate and where deficiencies are found they are repaired restoring the system to adequate condition. Therefore, based on these inspections and the deficiencies found and repaired, it is MidAmerican's judgment that the condition of the transmission and distribution system is in good repair mechanically and electrically and is able to provide safe and reliable service to MidAmerican's customers.

ii. **Interruption and Voltage Variance Summary**

[411.120 b) 3) G) ii)]:

A summary of the jurisdictional entity's interruptions and voltage variances reportable under this Part, including the reliability indices for the annual reporting period.

[411.120 b) 3) G) vii)]:

The corresponding information, in the same format, for the previous 3 annual reporting periods, if available.

MidAmerican's Illinois District serves 81,447 customers. In 2000, the Illinois District experienced 123,877 customer interruptions, which affected 57,344 customers. The total interruption time associated with these interruptions was 15,016,296 customer-minutes.

Reliability Indices for the Illinois District are as follows:

**ILLINOIS DISTRICT
2000 ELECTRIC RELIABILITY
INDICES**

SYSTEM¹ AVERAGE INTERRUPTION FREQUENCY INDEX	CUSTOMER² AVERAGE INTERRUPTION DURATION INDEX	CUSTOMER³ AVERAGE INTERRUPTION FREQUENCY INDEX
1.521	121.22	2.160

$$1 - \text{SAIFI} = \frac{\text{Number of Customer Interruptions}}{\text{Number of Customers Served}} = \frac{123,877 \text{ Customer-Interruptions}}{81,447 \text{ Customers}}$$

$$2 - \text{CAIDI} = \frac{\text{Sum of all Interruption Durations}}{\text{Number of Customer Interruptions}} = \frac{15,016,296 \text{ Customer-Interruption minutes}}{123,877 \text{ Customer-Interruptions}}$$

$$3 - \text{CAIFI} = \frac{\text{Number of Customer Interruptions}}{\text{Number of Customers Affected}} = \frac{123,877 \text{ Customer-Interruptions}}{57,344 \text{ Customer Affected}}$$

The table below shows minutes out per interruption by cause for 2000:

**Minutes Out per Interruption Cause
Illinois District
2000**

Interruption Cause	Minutes Out per Interruption
Animal	91
Equipment OH	163
Equipment UG	287
MEC Error	29
Other	100
Public	114
Substation	87
Transmission	56
Tree Related	222
Weather	226

iii. **Expenditures for Transmission Construction and Maintenance**

[411.120 b) 3) G) iii)]:

The jurisdictional entity's expenditures for transmission construction and maintenance for the annual reporting period expressed in constant 1998 dollars, the ratio of those expenditures to the jurisdictional entity's transmission investment, and the average remaining depreciation lives of the entity's transmission facilities, expressed as a percentage of total depreciation lives.

[411.120 b) 3) G) vii)]:

The corresponding information, in the same format, for the previous 3 annual reporting periods, if available.

**Expenditures for Illinois District
Transmission Construction¹ and Maintenance²
(\$1,000's)
(1997 – 2000)**

	2000³	1999	1998	1997
Construction	\$ 176	\$ 128	\$ 656	\$ 4,652
O&M	<u>\$ 1,443</u>	<u>\$ 1,394</u>	<u>\$ 1,383</u>	<u>\$ 1,427</u>
Total	<u>\$ 1,619</u>	<u>\$ 1,522</u>	<u>\$ 2,039</u>	<u>\$ 6,079</u>

1- This represents capital dollars for projects historically budgeted as transmission and directly attributable to the Illinois District.

- 2- The dollars for 1997 and 1998 come from MidAmerican's FORM 21 ILCC filing with the Illinois Commerce Commission, page 5, Section VIII. 'Operating Revenues and Expenses', Line No. 4 'Transmission' for December 31 of the year as noted. In the FORM 21 ILCC 1999 and 2000 filings, the dollars for 'Transmission' were not listed separately and therefore were broken out.
- 3- MidAmerican received approval per FERC Docket # ER99-3887-00 on February 4, 2000 to transfer specifically identified transmission assets and accumulated depreciation to local distribution facilities. Transfer of these assets was recorded during the year 2000 and is reflected in year-end 2000 balances. Redefinition of these assets was performed pursuant to FERC Order 888 using the FERC seven factor test guidelines. Therefore, construction and maintenance expenditures for 2000 will not be directly comparable with prior years' expenditures.

**Ratio of Illinois District Transmission Construction and Maintenance Expenditures
To Illinois District Transmission Investment
(1997 – 2000)**

	2000¹	1999	1998	1997
Transmission Investment (depreciated)	\$24,440,249	\$34,311,946	\$32,426,637	\$32,308,172
Ratio (Total/ Transmission Investment (depreciated))	6.6%	4.4%	6.3%	18.8%

- 1- MidAmerican received approval per FERC Docket # ER99-3887-00 on February 4, 2000 to transfer specifically identified transmission assets and accumulated depreciation to local distribution facilities. Transfer of these assets was recorded during the year 2000 and is reflected in year-end 2000 balances. Redefinition of these assets was performed pursuant to FERC Order 888 using the FERC seven factor test guidelines. Therefore, construction and maintenance expenditures for 2000 will not be directly comparable with prior years' expenditures.

**Average Remaining Depreciation Lives of
Illinois District Transmission Facilities
As a Percent of Total Depreciation Lives
(1997 – 2000)**

Account	Description	% Remaining Life			
		2000 ¹	1999	1998	1997
350.1	Land Rights	51%	52%	53%	55%
352	Structures	73%	68%	64%	58%
353	Station Equipment	70%	68%	69%	71%
354	Towers & Fixtures	50%	50%	52%	54%
355	Poles & Fixtures	71%	69%	70%	71%
356	Overhead Conductor Devices	63%	62%	63%	63%
356.1	Overhead Conductor	9%	14%	19%	24%
	Devices – Iowa Power				
358	Underground Conductor Devices	54%	56%	58%	59%
359	Roads & Trails	21%	23%	25%	27%

1- MidAmerican received approval per FERC Docket # ER99-3887-00 on February 4, 2000 to transfer specifically identified transmission assets and accumulated depreciation to local distribution facilities. Transfer of these assets was recorded during the year 2000 and is reflected in year-end 2000 balances. Redefinition of these assets was performed pursuant to FERC Order 888 using the FERC seven factor test guidelines. Therefore, construction and maintenance expenditures for 2000 will not be directly comparable with prior years' expenditures.

iv. Expenditures for Distribution Construction and Maintenance

[411.120 b) 3) G) iv):

The jurisdictional entity's expenditures for distribution construction and maintenance for the annual reporting period expressed in constant 1998 dollars, the ratio of those expenditures to the jurisdictional entity's distribution investment, and the average remaining depreciation lives of the entity's distribution facilities, expressed as a percentage of total depreciation lives.

[411.120 b) 3) G) vii):

The corresponding information, in the same format, for the previous 3 annual reporting periods, if available.

**Expenditures for Illinois District
Distribution Construction¹ and Maintenance²
(\$1,000's)
(1997 – 2000)**

	2000³	1999	1998	1997
Construction	\$ 3,857	\$ 3,639	\$ 4,088	\$ 2,833
O&M	<u>\$ 7,533</u>	<u>\$ 7,114</u>	<u>\$ 6,765</u>	<u>\$ 7,399</u>
Total	<u>\$ 11,390</u>	<u>\$ 10,753</u>	<u>\$ 10,853</u>	<u>\$ 10,232</u>

- 1- This represents specific Illinois District project dollars historically budgeted as distribution and an allocation of specific project common dollars historically budgeted as distribution to the Illinois District.
- 2- These dollars come from MidAmerican's FORM 21 ILCC filing with the Illinois Commerce Commission, page 5, Section VIII. 'Operating Revenues and Expenses', Line No. 4 'Distribution' for December 31 of the year as noted. . In the 1999 and 2000 Form 21 ILCC filings, the dollars for 'Distribution' were not listed separately and therefore were broken out.
- 3- MidAmerican received approval per FERC Docket # ER99-3887-00 on February 4, 2000 to transfer specifically identified transmission assets and accumulated depreciation to local distribution facilities. Transfer of these assets was recorded during the year 2000 and is reflected in year-end 2000 balances. Redefinition of these assets was performed pursuant to FERC Order 888 using the FERC seven factor test guidelines. Therefore, construction and maintenance expenditures for 2000 will not be directly comparable with prior years' expenditures.

**Ratio of Illinois District Distribution Construction and Maintenance Expenditures
To Illinois District Distribution Investment
(1997 – 2000)**

	2000¹	1999	1998	1997
Distribution Investment (depreciated)	\$69,720,009	\$64,318,142	\$ 68,039,834	\$ 65,934,447
Ratio (Total/ Distribution Investment (depreciated))	16.3%	16.7%	16.0%	15.5%

- 1- MidAmerican received approval per FERC Docket # ER99-3887-00 on February 4, 2000 to transfer specifically identified transmission assets and accumulated depreciation to local distribution facilities. Transfer of these assets was recorded during the year 2000 and is reflected in year-end 2000 balances. Redefinition of these assets was performed pursuant to FERC Order 888 using the FERC seven factor test guidelines. Therefore, construction and maintenance expenditures for 2000 will not be directly comparable with prior years' expenditures.

**Average Remaining Depreciation Lives of
Illinois District Distribution Facilities
As a Percent of Total Depreciation Lives
(1997 – 2000)**

Account	Description	% Remaining Life			
		2000 ¹	1999	1998	1997
360.1	Land Rights	55%	65%	67%	62%
361	Structures	62%	67%	68%	66%
362	Station Equipment	64%	66%	66%	67%
364	Poles/Towers/Fixtures	58%	60%	61%	62%
365	Overhead Conductor	67%	68%	69%	70%
366	Underground Conduit	66%	66%	67%	68%
367	Underground Conductor Devices	72%	72%	72%	73%
368	Line Transformers	62%	63%	63%	64%
369	Services	66%	65%	66%	66%
370	Meters	66%	67%	68%	68%
371	Installations on Customers Premises	53%	54%	55%	57%
373	Street Lights	77%	78%	79%	80%

1- MidAmerican received approval per FERC Docket # ER99-3887-00 on February 4, 2000 to transfer specifically identified transmission assets and accumulated depreciation to local distribution facilities. Transfer of these assets was recorded during the year 2000 and is reflected in year-end 2000 balances. Redefinition of these assets was performed pursuant to FERC Order 888 using the FERC seven factor test guidelines. Therefore, construction and maintenance expenditures for 2000 will not be directly comparable with prior years' expenditures.

Attachment E contains a table showing the age of the distribution system segmented by distribution facilities.

v. Customer Satisfaction Survey Results

[411.120 b) 3) G) v)]:

The results of a customer satisfaction survey completed during the annual reporting period and covering reliability, customer service, and customer understanding of the jurisdictional entity's services and prices.

[411.120 b) 3) G) vii)]:

The corresponding information, in the same format, for the previous 3 annual reporting periods, if available.

See Attachment F for the results of the MidAmerican Energy Company Electric Utility Customer Satisfaction Survey 2000. Appendices D and E of this survey total 2,370 pages and have not been included with this filing. However, those appendices were previously provided to Commission Staff on February 21, 2001.

vi. **Overview of Customer Reliability Complaints**

[411.120 b) G) vi]):

An overview pertaining to the number and substance of customers' reliability complaints for the annual reporting period and their distribution over the jurisdictional entity's operating areas.

[411.120 b) G) vii]):

The corresponding information, in the same format, for the previous 3 annual reporting periods, if available.

There were 10 reliability related complaints received from customers in MidAmerican's Illinois District during 2000. A breakdown, by cause, of these complaints follows:

Reliability Complaints Illinois District 2000	
Cause	Number of Complaints
Excessive Outage Duration	2
Excessive Outage Frequency	6
Faulty Equipment	1
Dissatisfied with Service	1

The locations of these complaints are listed in Attachment G.

H. **Reliability Indices**

[411.120 b) H]):

A table showing the achieved level of each of the three reliability indices of each operating area for the annual reporting period (provided however, that for any reporting period commencing before April 1, 1998, a jurisdictional entity will not be required to report the CAIFI reliability index)

**ILLINOIS DISTRICT
2000 ELECTRIC RELIABILITY
INDICES**

SYSTEM¹ AVERAGE INTERRUPTION FREQUENCY INDEX	CUSTOMER² AVERAGE INTERRUPTION DURATION INDEX	CUSTOMER³ AVERAGE INTERRUPTION FREQUENCY INDEX
1.521	121.22	2.160

$$1 - \text{SAIFI} = \frac{\text{Number of Customer Interruptions}}{\text{Number of Customers Served}} = \frac{123,877 \text{ Customer-Interruptions}}{81,447 \text{ Customers}}$$

$$2 - \text{CAIDI} = \frac{\text{Sum of all Interruption Durations}}{\text{Number of Customer Interruptions}} = \frac{15,016,296 \text{ Customer-Interruption minutes}}{123,877 \text{ Customer-Interruptions}}$$

$$3 - \text{CAIFI} = \frac{\text{Number of Customer Interruptions}}{\text{Number of Customers Affected}} = \frac{123,877 \text{ Customer-Interruptions}}{57,344 \text{ Customers Affected}}$$

I. Worst Performing Circuits

[411.120 b) I):

A list showing the worst-performing circuits for each operating area for the annual reporting period with the understanding that the designation of circuits as “worst-performing circuits” shall not, in and of itself, indicate a violation of this Part.

The following table shows the worst performing circuits in 2000 in the Illinois District according to the calculated indices.

Illinois District Worst Performing Circuits of 2000

Index Used	Index Value	Circuit Designation	Number of Customers
SAIFI	6.645	490561-574499	2010
CAIDI	422.63	466424-552851	601
CAIFI	6.832	490561-574499	2010

Maps showing the geographic location of each worst performing circuit are shown in Attachments H and I.

The following table shows the 2000 reliability indices for the worst performing circuits listed in the 1999 Annual Report.

**Illinois District Worst Performing Circuits of 1999
2000 Reliability Indices**

Index Used	Index Value	Circuit Designation	Number of Customers
SAIFI	0.081	440149-546081	1051
CAIDI	252.03	478169-568227	1028
CAIFI	1.000	440149-546081	1051

J. Operating & Maintenance History of the Worst-Performing Circuit

[411.120 b) 3) J]):

A statement of the operating and maintenance history of circuits designated as worst-performing circuits; a description of any action taken or planned to improve the performance of any such circuit (which shall include information concerning the cost of such action); and a schedule for completion of any such action. (The jurisdictional entity may decide, based on cost considerations or other factors, that it should take no action to improve the performance of one or more circuits designated as worst-performing circuits. If the jurisdictional entity decides to take no action to improve the performance of one or more circuits designated as worst-performing circuits, the jurisdictional entity shall explain its decision in its Annual Report).

Circuit 490561-574499

$$\text{SAIFI} = \frac{\text{Number of Customer Interruptions}}{\text{Number of Customers Served}} = \frac{13,356 \text{ Customer-Interruptions}}{2,010 \text{ Customers}} = 6.645$$

$$\text{CAIFI} = \frac{\text{Number of Customer Interruptions}}{\text{Number of Customers Affected}} = \frac{13,356 \text{ Customer-Interruptions}}{1,955 \text{ Customers Affected}} = 6.832$$

The circuit with the highest SAIFI and CAIFI indices was circuit 490561-574499, which had 2010 customers in 2000. The elevated SAIFI and CAIFI indices are due to six complete circuit interruptions experienced in 2000. The six interruptions resulted from two weather, one tree, one animal, one transformer failure, and one public accident related interruptions.

This circuit was scheduled for and inspected on its 10-year distribution inspection cycle in 1999. Three repair projects were generated that included replacement or repair of deteriorated or damaged poles, crossarms, line hardware, arresters, conductor and other miscellaneous items. All of these corrective actions were completed in 2000 at a cost of \$18,602. Tree trimming was performed on this circuit in 1999 and is scheduled again in 2002. Additional reliability improvement projects include a squirrel guard project scheduled for 2001 at an estimated cost of \$35,000, a ravine relocation project in Port Byron scheduled for 2001 at an estimated cost of \$25,000, and two projects involving the addition of arresters and fusing to better sectionalize two residential areas in the Port Byron/Rapids City areas. Both projects were completed in 2001 at a total cost of \$9,375.

Circuit 466424-552851

$$\text{CAIDI} = \frac{\text{Sum of all Interruption Durations}}{\text{Number of Customer Interruptions}} = \frac{138,623 \text{ Customer-Interruption minutes}}{328 \text{ Customer-Interruptions}} = 422.63$$

The circuit with the highest CAIDI index was circuit 466424-552851, which had 601 customers in 2000. This circuit's CAIDI index was elevated primarily due to two separate interruptions. One of the interruptions involved lightning that interrupted 94 customers for 706 minutes and the other involved an underground cable failure that interrupted 65 customers for 698 minutes.

Since there were only two outages that accounted for why this circuit had the worst CAIDI reliability index, other than replacing the fuse that operated as a result of the lightning strike and repair of the cable failure no specific additional projects are planned. This circuit was scheduled for, and inspected on its 10 year distribution inspection cycle in 2000. Two repair projects were generated that included replacement or repair of deteriorated or damaged poles, crossarms, line hardware, arresters, conductor and other miscellaneous items. One of these projects is complete and the other is still in progress. Repairs were done in conjunction with circuits 13-22-1,2, & 4 also, with a total expenditure to date for all circuits of \$19,147, and an expected expenditure at completion of approximately \$20,154. The circuit is also scheduled for tree trimming in the third quarter of 2001.

The following is an assessment of the performance of the worst circuits listed in the 1999 Annual Report along with any actions taken to improve reliability:

Circuit 440149-546081

$$\text{SAIFI} = \frac{\text{Number of Customer Interruptions}}{\text{Number of Customers Served}} = \frac{85 \text{ Customer-Interruptions}}{1,051 \text{ Customers}} = 0.081$$

$$\text{CAIFI} = \frac{\text{Number of Customer Interruptions}}{\text{Number of Customers Affected}} = \frac{85 \text{ Customer-Interruptions}}{85 \text{ Customers Affected}} = 1.000$$

The circuit with the highest SAIFI and CAIFI in the 1999 Annual Report was circuit 490561-574499, which had 1051 customers in 2000. In 2000 this circuit's SAIFI and CAIFI performance was excellent evidenced by only 85 customers interrupted during 2000 out of 1051 customers served from the circuit. In addition, each of these customers only experienced one interruption during 2000.

This circuit was scheduled for, and inspected on its 10 year distribution inspection cycle in 2001. Three repair projects were generated, that included replacement or repair of deteriorated or damaged poles, crossarms, line hardware, arresters, conductor and other miscellaneous items. One project is completed and two of the projects are still in progress with an estimated cost of \$9,235. Additional reliability improvements consisted of a squirrel guard project completed in 2000 at a cost of \$8,402. The circuit was tree trimmed in the first quarter of 2001.

Circuit 478169-568227

$$\text{CAIDI} = \frac{\text{Sum of all Interruption Durations}}{\text{Number of Customer Interruptions}} = \frac{27,723 \text{ Customer-Interruption minutes}}{110 \text{ Customer-Interruptions}} = 252.03$$

The circuit with the highest CAIDI in the 1999 Annual Report was circuit 478169-568227, which had 1028 customers in 2000. This circuit's CAIDI in 2000 resulted primarily from lightning and overhead transformer malfunction interruptions. The total number of customer interruptions was

110 with the greatest number of customers impacted by an interruption being 17. Out of 1028 customers, 95 experienced interruptions and nearly all of those customers experienced only one interruption during 2000 evidenced by the CAIFI index for this circuit of 1.1579.

This circuit is scheduled for its 10-year distribution inspection in 2001. It is also scheduled for tree trimming in the third quarter of 2001. A capacitor optimization project was completed in the fall of 2000 at an approximate cost of \$5,000.

K. Three Year Customer Outage Frequency Data

[411.120 b) 3) K):

Commencing three years after the adoption of this Part, tables or graphical representations, covering for the last three years all of the jurisdictional entity's customers and showing, in ascending order, the total number of customers which experienced a set number of interruptions during the year (i.e., the number of customers who experienced zero interruptions, the number of customers who experienced one interruption, etc.).

No report is due until the June 1, 2002 filing.

L. Three Year Customer Outage Duration Data

[411.120 b) 3) L):

Commencing three years after the adoption of this Part, for those customers who experienced interruptions in excess of the service reliability Targets, a list of every customer, identified by a unique number assigned by the jurisdictional entity and not the customer's name or account number, and the number of interruptions and interruption duration experienced in each of the three preceding years, and the number of consecutive years in which the customer has experienced interruptions in excess of the service reliability Targets.

No report is due until the June 1, 2002 filing.

M. Contact Person

[411.120 b) 3) M):

The name, address and telephone number of a jurisdictional entity representative who can be contacted for additional information regarding the Annual Report.

Any requests for additional information should be directed to:

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